

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/001709

International filing date (day/month/year)
04.05.2005

Priority date (day/month/year)
17.05.2004

International Patent Classification (IPC) or both national classification and IPC
H01L23/58, H01L27/02, H01L27/118

Applicant
NDS LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/GB2005/001709

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2005/001709

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-24
	No: Claims	
Inventive step (IS)	Yes: Claims	1-24
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document:

D1: US-A-5 883 000 (PASCH ET AL) 16 March 1999.

2. Clarity and Conciseness Objection - Article 6 PCT

The application does not meet the requirements of Article 6 PCT, because **claims 1, 6, 7, 13, 14, 17, 18, 22, 23** are not clear and concise.

Although claims 1, 7, 14, 18 have been drafted as separate independent method claims and claims 6, 13, 17, 22, 23 as separate independent device claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

- 3.1 The subject-matter of independent claims 1, 7, 14 and 18 of the present application meets the requirements of Article 33(2)(3)(4) PCT, as it is considered as new and inventive with respect to the cited state of the art and as it has an industrial applicability.

Indeed none of the documents cited in the International Search Report discloses a method of manufacturing additional layers having the features claimed in said claims.

D1 discloses a method for adding a layer to an integrated circuit comprising:

- a) providing an integrated circuit,
- b) depositing, over substantially all of an exposed surface of the integrated circuit, an additional layer of material whose conductivity can be altered; and
- c) selectively altering the conductivity of a first portion of the additional layer by selective annealing, to produce a sub-circuit in the additional layer, the sub-circuit being in operative electrical communication with the integrated

circuit.

However D1 does not mention providing an integrated circuit having an interconnect layer on top of the integrated circuit before depositing an additional layer of material whose conductivity can be altered.

As this distinguishing feature is new and considered not to be obvious to the skilled person, the subject-matter of independent claims 1, 7, 14 and 18 is considered to be novel and inventive.

- 3.2 Similarly the subject-matter of independent claims 6, 13, 17, 22 and 23, related to integrated circuits produced by the methods of claims 1, 7, 14 and 18, is considered to be novel and inventive and industrially applicable, Article 33(2)(3)(4) PCT.
- 3.3 The combination of the subject-matter of the independent claims with the additional features of their dependent claims 2-5, 8-12, 15, 16, 19-21 and 24 is also considered as new, inventive and industrially applicable, Article 33(2)(3)(4) PCT.